

FIG. 1

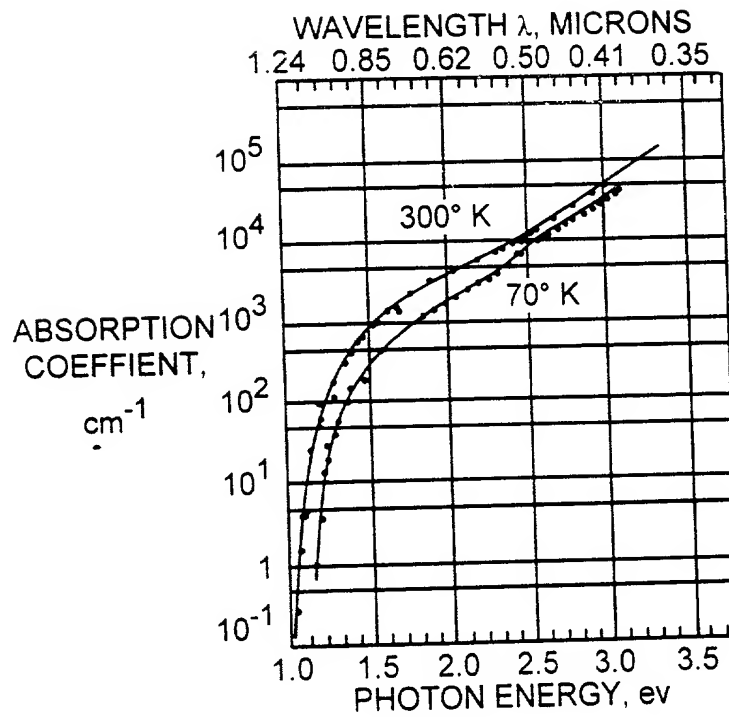


FIG. 2

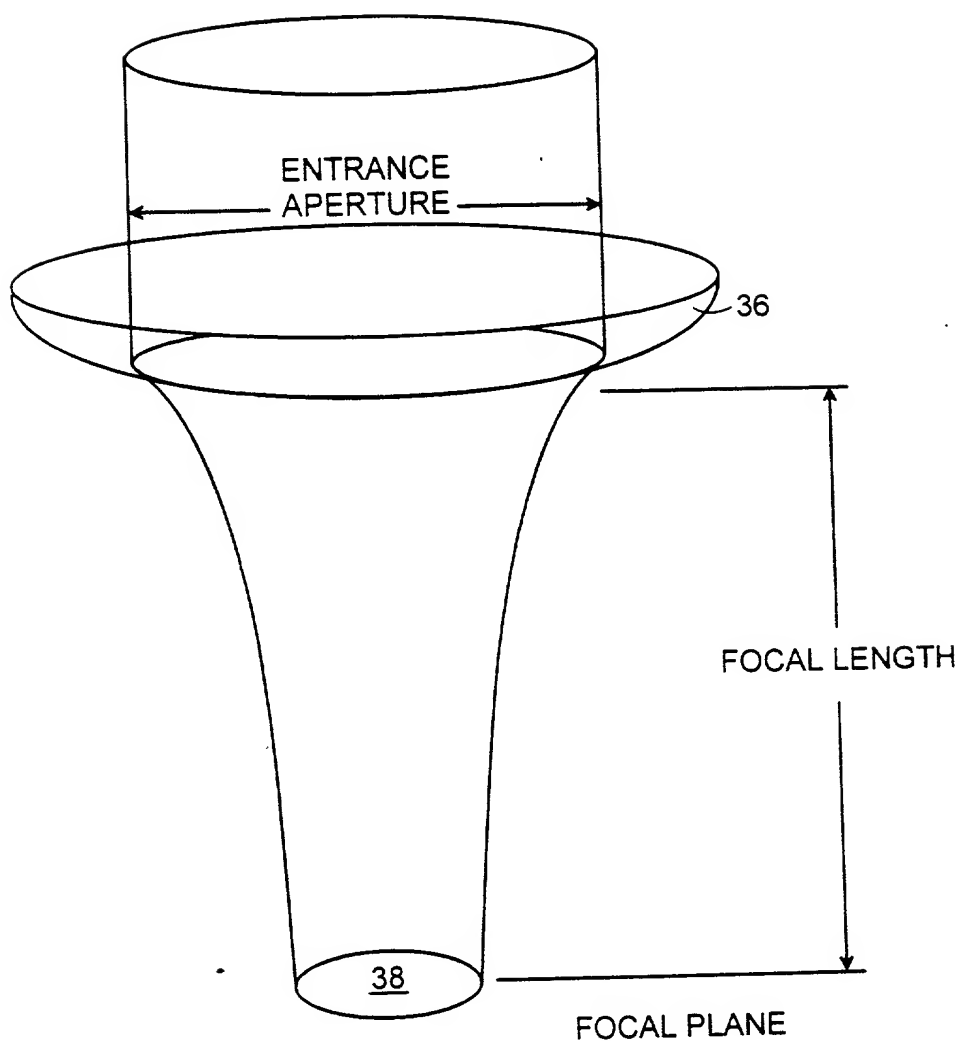


FIG. 3

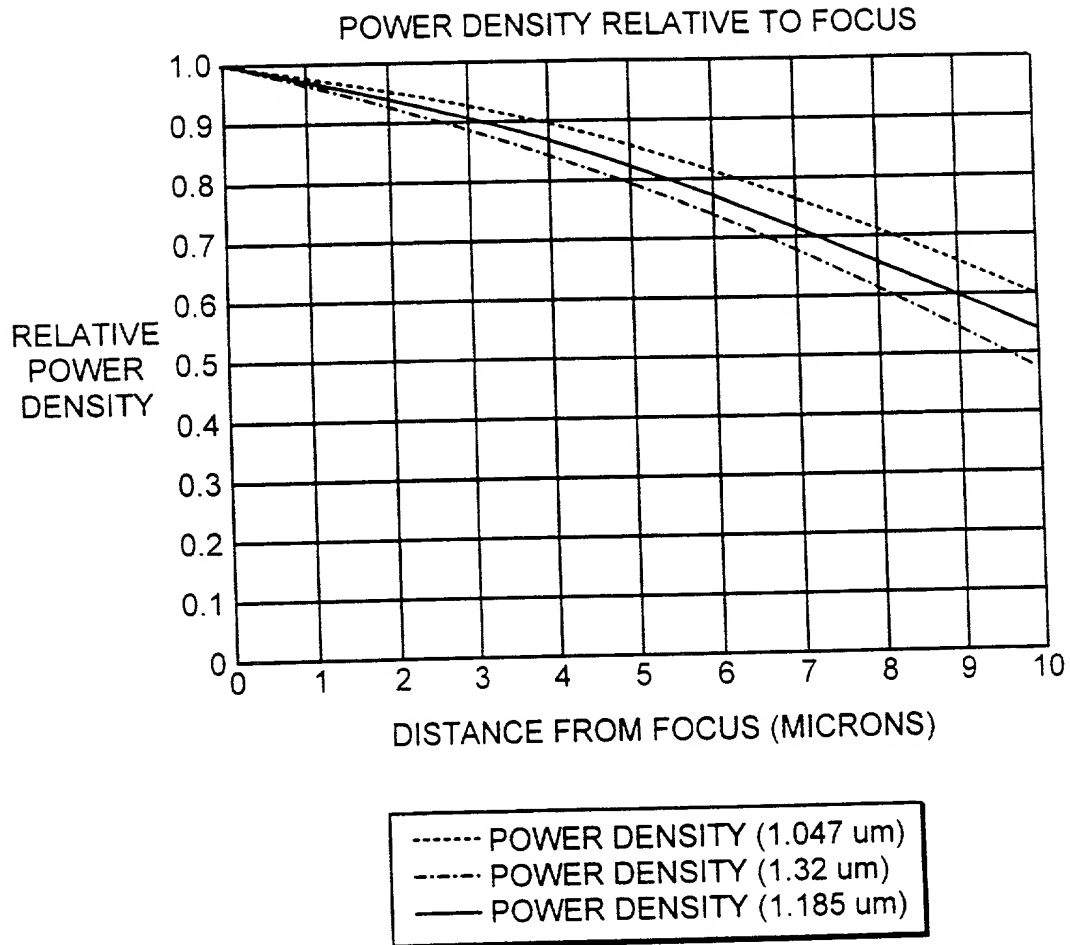


FIG. 4

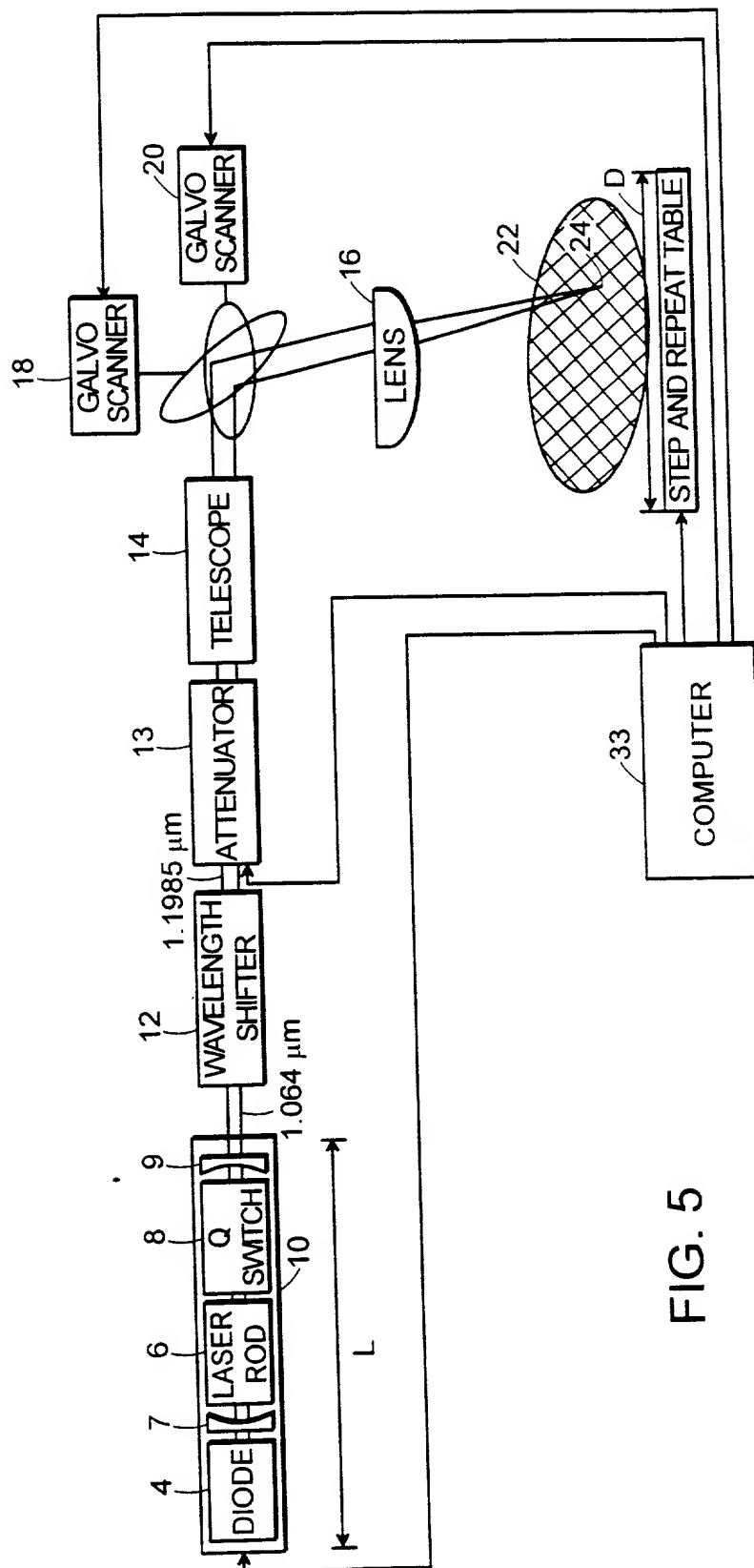


FIG. 5

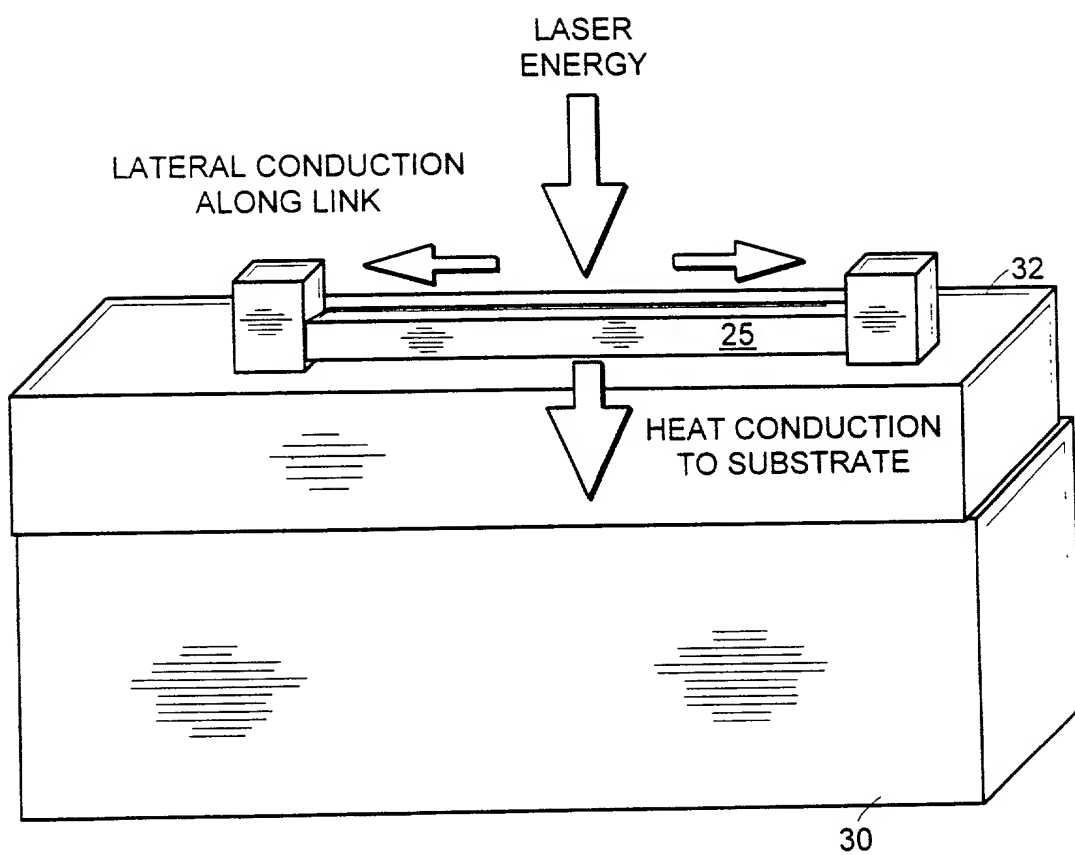


FIG. 6

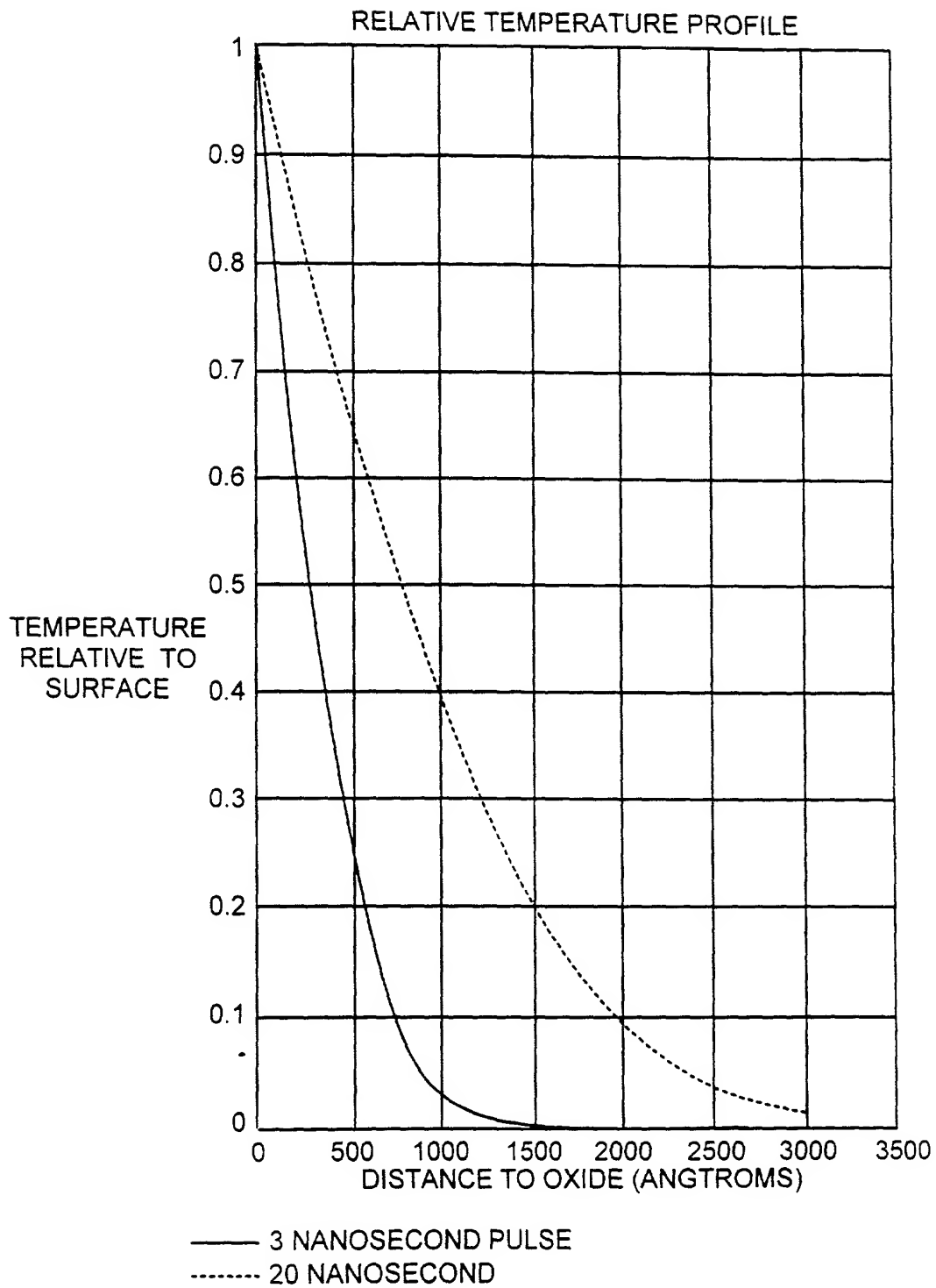


FIG. 7

Matter No.: 06457-007003
Applicant(s): Donald V. Smart
LASER PROCESSING

1003541-1003541

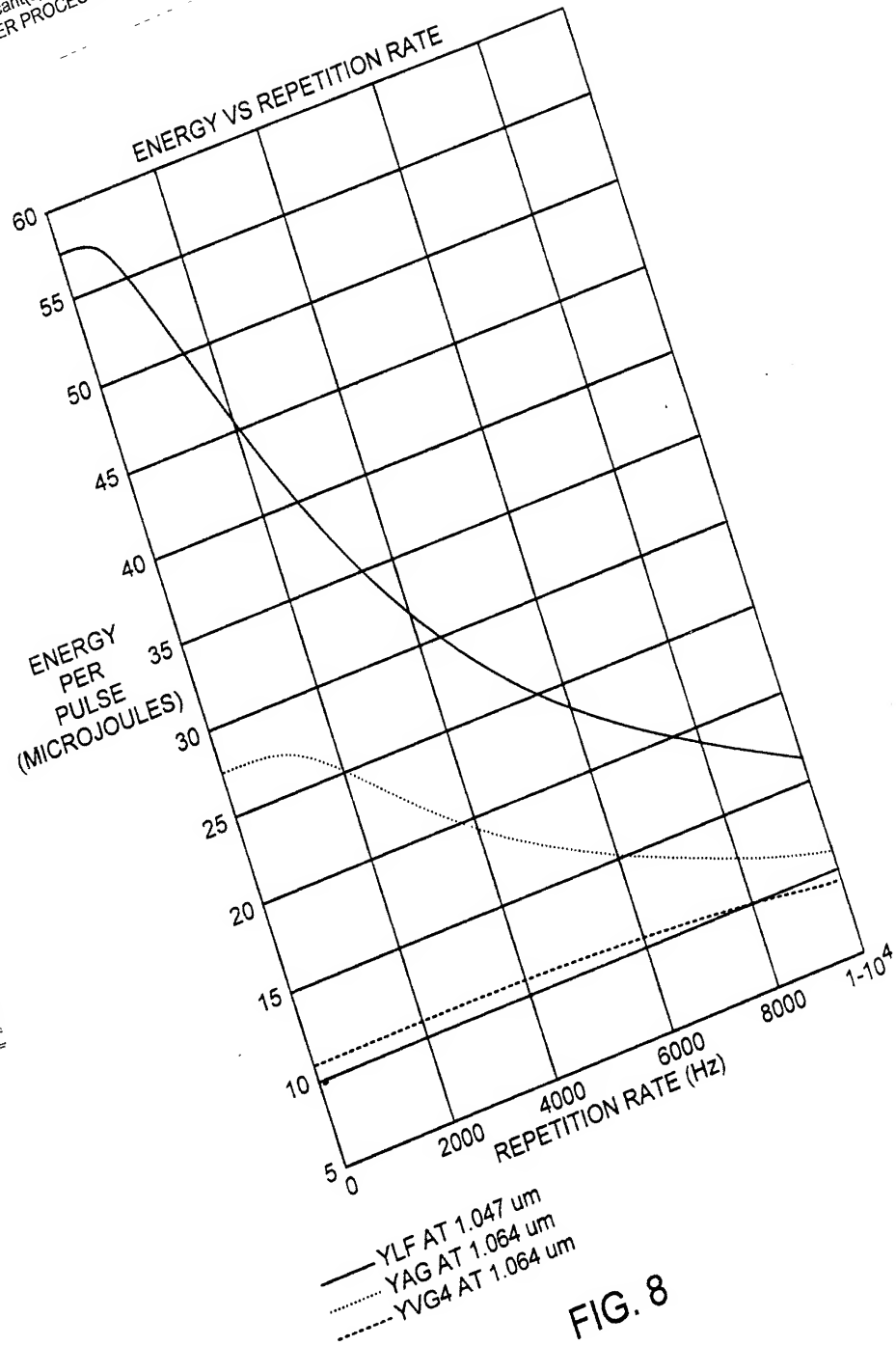


FIG. 8

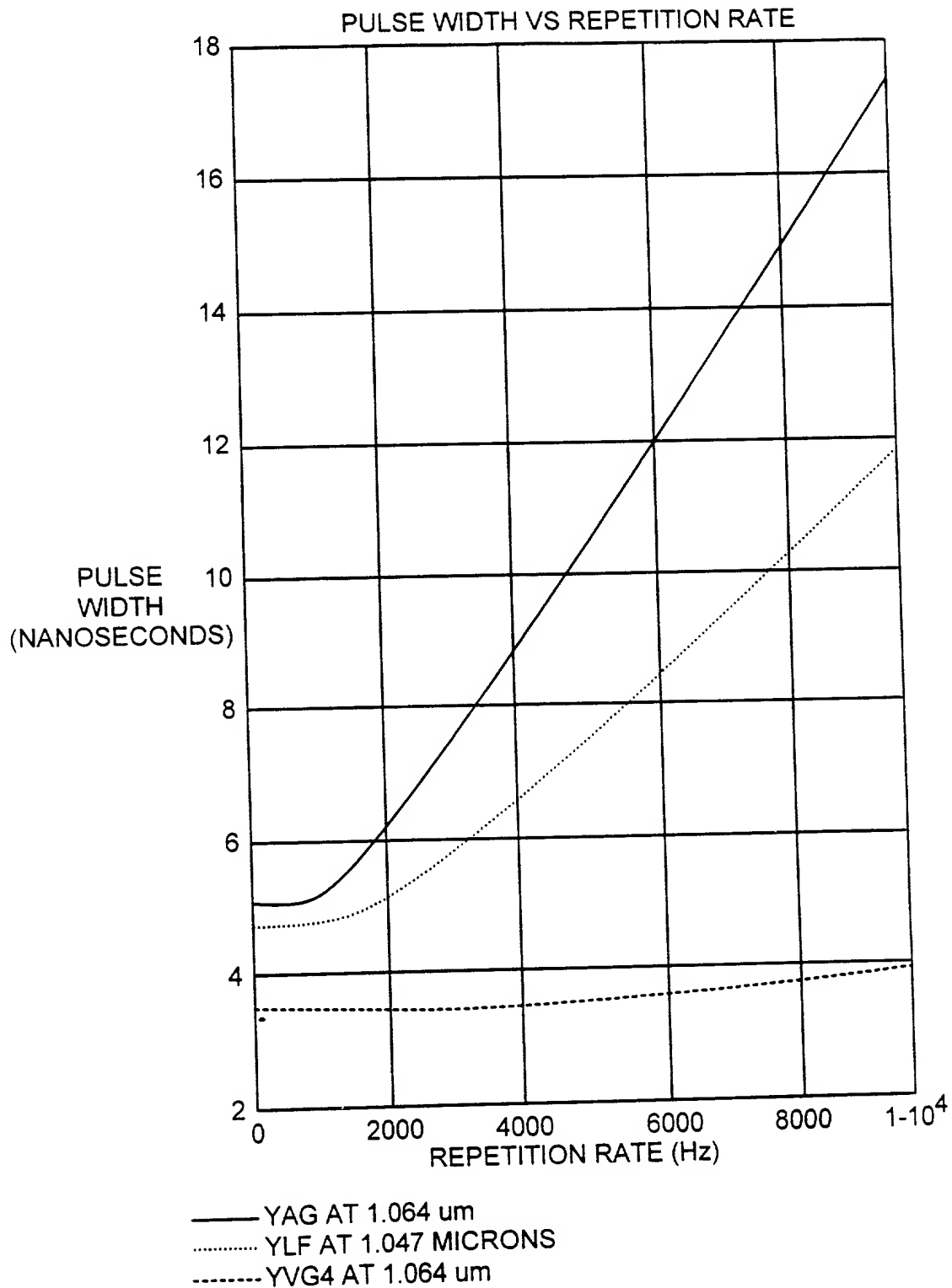


FIG. 9

MATERIAL	STIMULATED CROSS SECTION	FLUORESCENT LIFETIME	ISAT	SINGLE PASS GAIN
YAG (1.064 μm)	6×10^{-17}	230 μSEC	14 WATTS/mm^2	21%
YAG (1.32 μm)	1.25×10^{-17}	230 μSEC	52 WATTS/mm^2	6%
YLF (1.047 μm)	4.0×10^{-17}	470 μSEC	10 WATTS/mm^2	29%
YLF 1.32 μm	0.8×10^{-17}	470 μSEC	40 WATTS/mm^2	7%
Nd:VO4 (1.064 μm)	15.6×10^{-17}	90 μSEC	13.5 WATTS/mm^2	21%
Nd:VO4 (1.34 μm)	6×10^{-17}	90 μSEC	28 WATTS/mm^2	10%

FIG. 10

MATERIAL / WAVELENGTH	OPTIMUM OUTPUT COUPLER
YAG / 1.064 MICRONS	6%
YAG / 1.32 MICRONS	3%
YLF / 1.047 MICRONS	7.5%
YLF / 1.32 MICRONS	3%
YVO4 / 1.064 MICRONS	6%
YVO4 / 1.34 MICRONS	4%

FIG. 11

MATERIAL / WAVELENGTH	MINIMUM PULSE WIDTH
YAG / 1.064 MICRONS	5.2 NANOSECONDS
YAG / 1.32 MICRONS	14 NANOSECONDS
YLF / 1.047 MICRONS	4.7 NANOSECONDS
YLF / 1.32 MICRONS	14 NANOSECONDS
YVO4 / 1.064 MICRONS	3.4 NANOSECONDS
YVO4 / 1.34 MICRONS	10.3 NANOSECONDS

FIG. 12

20240701 12:43:00

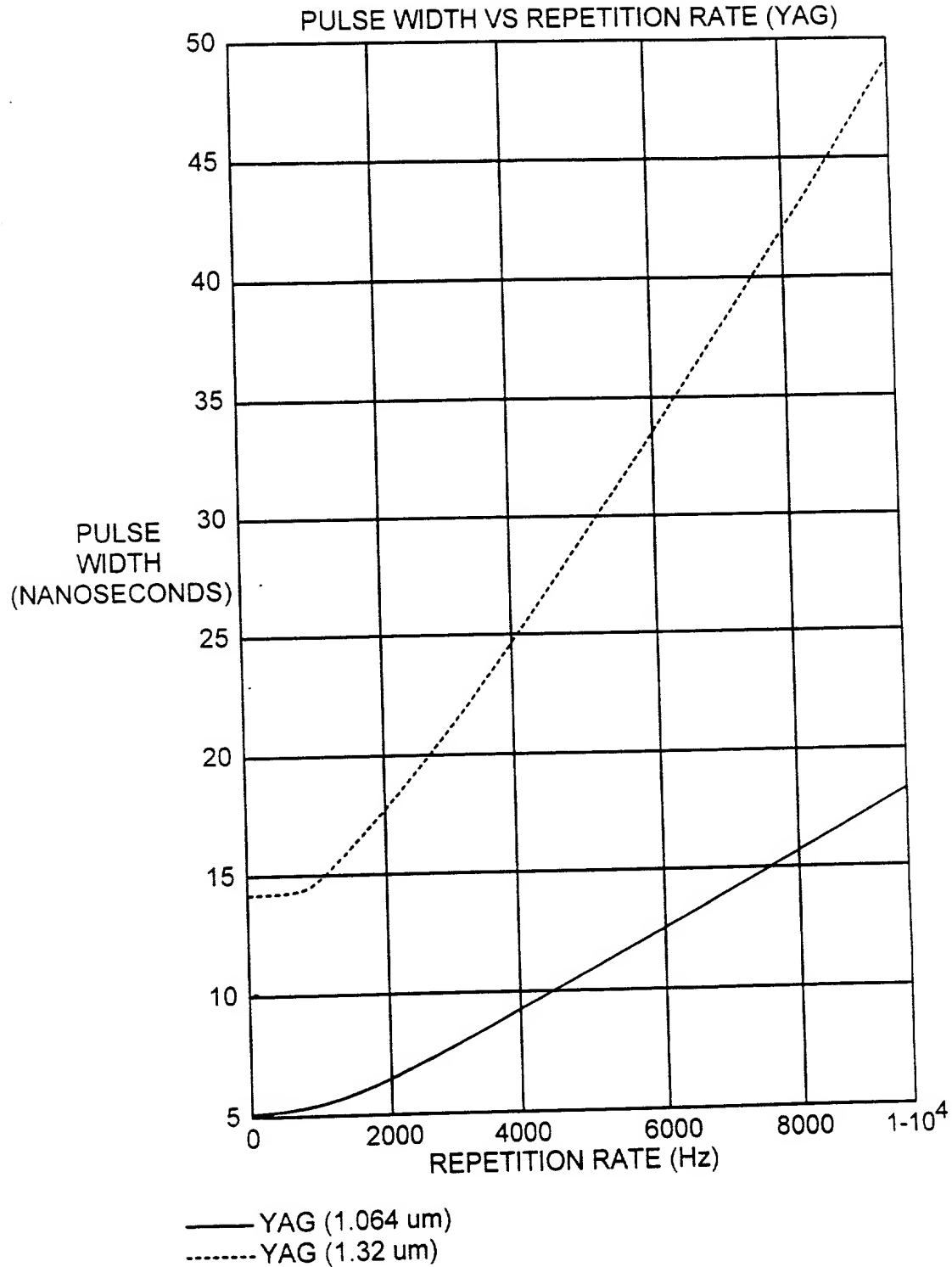


FIG. 13

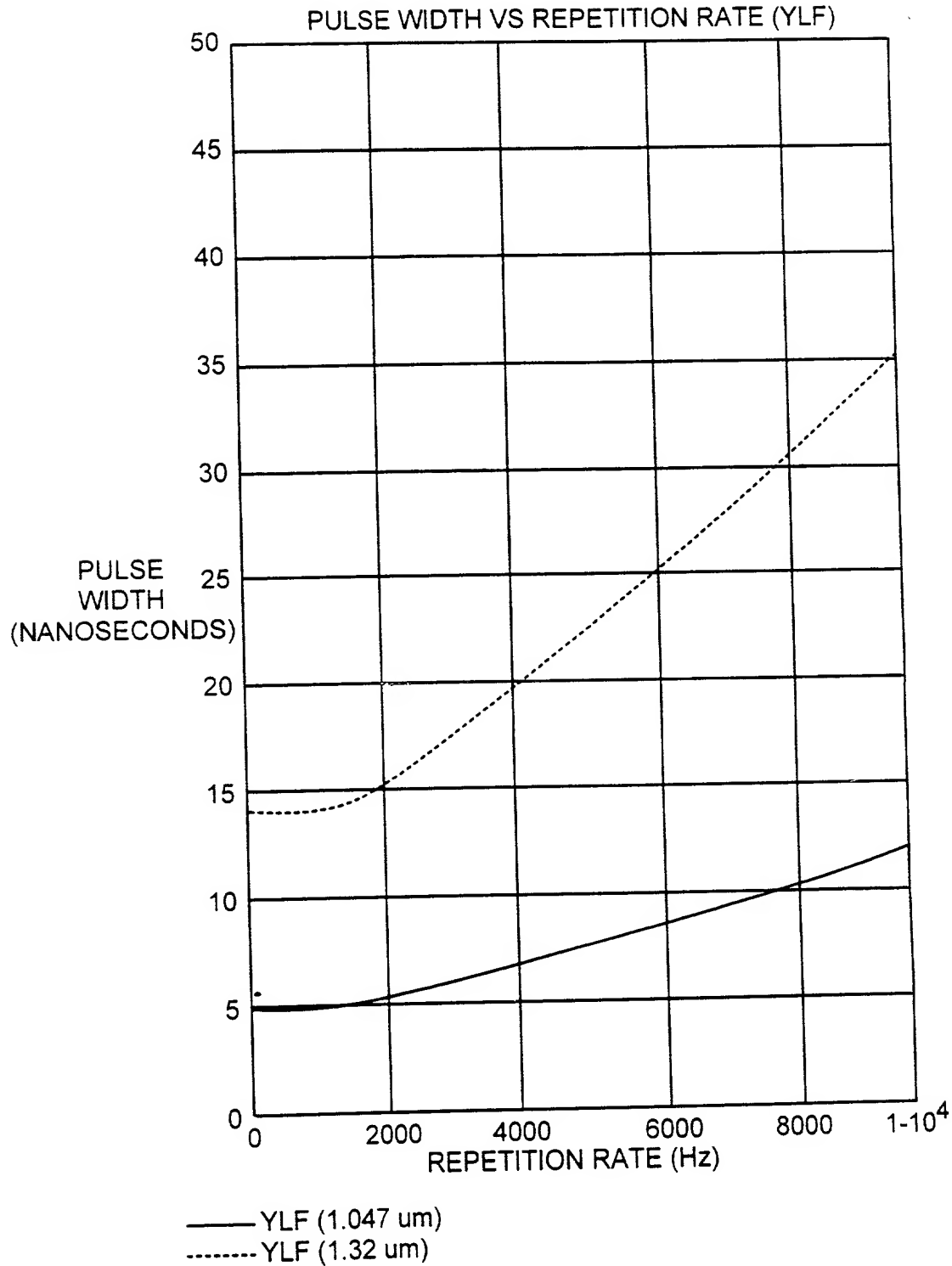


FIG. 14

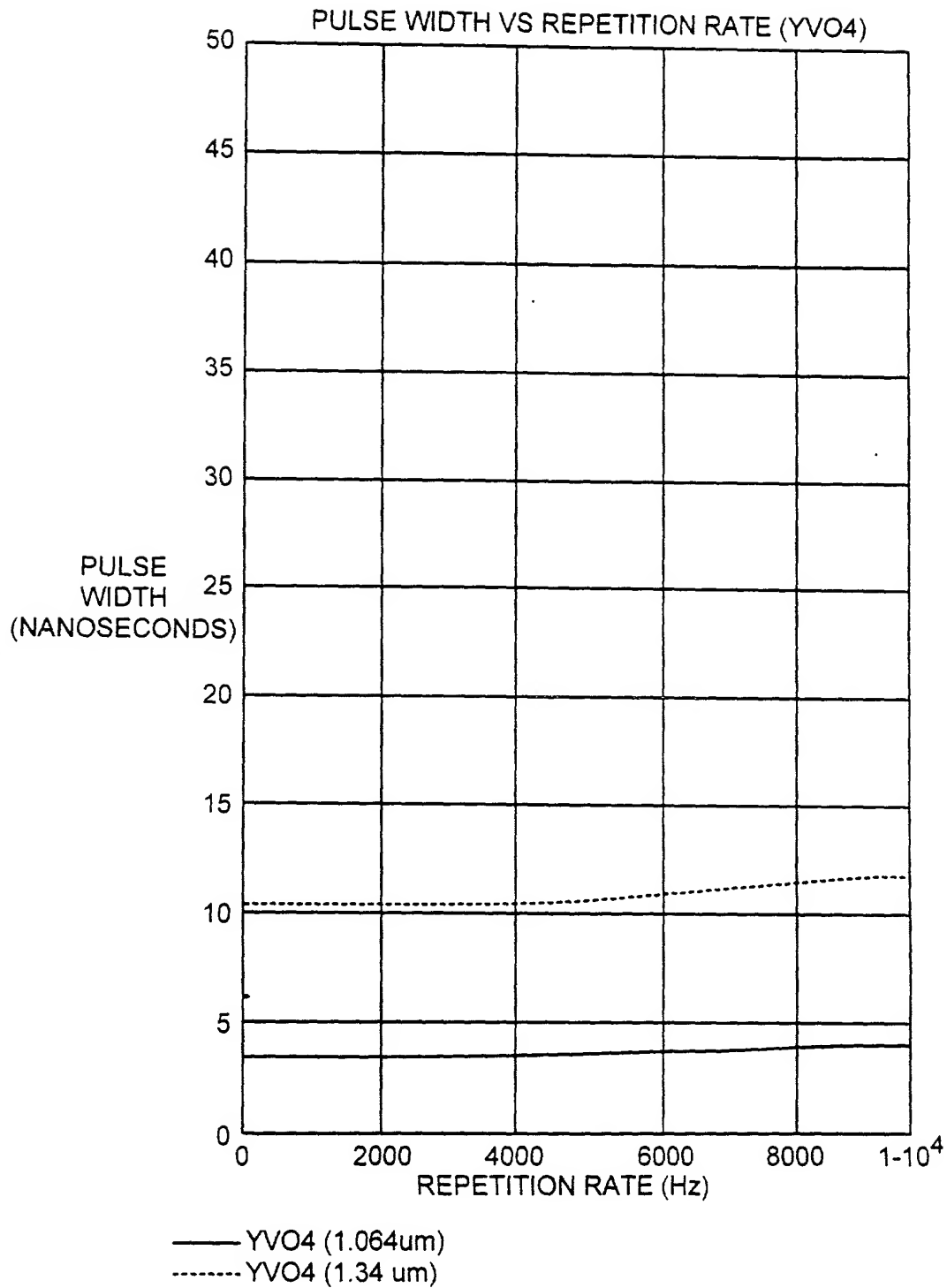
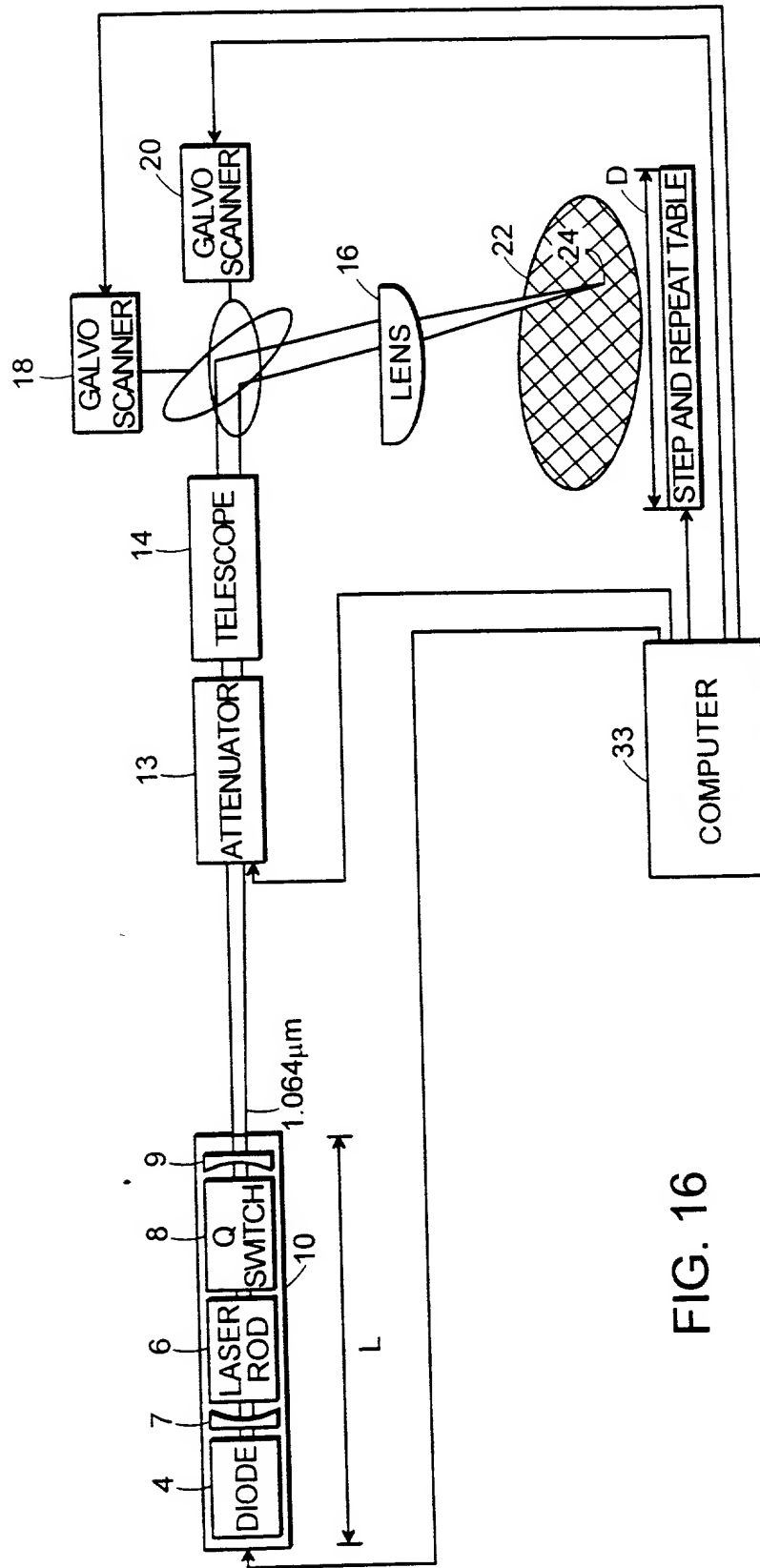


FIG. 15



20250720 14:30:00

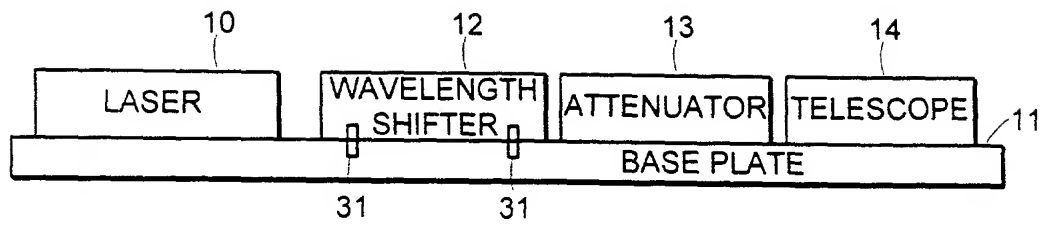


FIG. 17

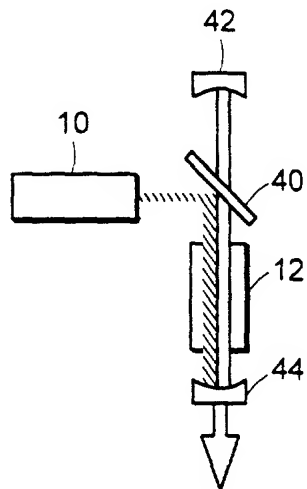


FIG. 18

204070-1 P.19 OF 20